based on the parameters of the VectorFeature. As discussed above, client history log **122** will be modified to reflect these updates from server **52***a*.

The object-oriented geospatial database system (i.e., GIDS) of the present invention allows users interested in a wide variety of mapping data to access and benefit from the GIDS over the Internet from any platform using a Web-enabled web browser. This allows the functionality of more powerful server machines to be exhibited on less capable client machines. This also gives users faster access to mapping data. The migration to a Web-based mapping client is advantageous by allowing clients with modest computing resources user-friendly access to state-of-the-art mapping data and software. Given an AOI, the GIDS provides multiple mapping data types for that region to the user for visualization (2D or 3D) and analysis. Further, with data-driven query capabilities over the network, data dissemination will be near-real-time or real-time (as the case may be) over the network. In summary, the GIDS fulfills a much needed requirement to provide mapping data of multiple types in an AOI to user in near-real-time or real-time (as the case may be) over a network, such as WWW.

Current alternative geospatial data systems obtain discrete data via CD-ROM or other media to then load the data into various software packages to individually generate 3D views, perform GIS queries, and perform other functionalities. There is no unified approach available.

The many features and advantages of the present invention are apparent from the detailed specification and thus, it is intended by the appended claims to cover all such features and advantages of the system which fall within the true spirit and scope of the invention. Further, numerous modifications and changes will readily occur to those skilled in the art from the disclosure of this invention. It is not desired to limit the invention to the exact construction and operation illustrated and described; accordingly, suitable modification and equivalents may be resorted to, as falling within the scope and spirit of the invention.

What is claimed is:

1. A method of building and maintaining an object-oriented spatial database of worldwide geospatial data from at least two or more data formats, the method comprising:

instantiating objects of the object-oriented database, using at least two of Vector Product Format (VPF), Raster Product Format (RPF), Text Product Standard (TPS), Environmental System Research Institute (ESRI) shape, Generic Sensor Format (GSF), Naval Oceanographic Office text (NAVOCEANO), and temporal information databases;

initializing spatial and non-spatial feature data of the object-oriented database;

spatially indexing data among objects from the at least two VPF, RPF, TPS, ESRI, GSF, NAVOCEANO and temporal information databases into the single, object-oriented spatial database;

receiving from a client computer in the database network an area of interest from a visual image, representing active data objects, displayed on a computer on the network;

identifying to the client computer data available for the area of interest;

responsive to a request for the data, querying over the network data objects in at least one database associated with the area of interest;

receiving from at least one remote computer over the network data objects in the at least one database associated with the area of interest and creating an object-oriented database of geospatial data using object models;

transmitting a web-based applet to the client computer for viewing the data objects overlaid on a map display; and

converting two dimensional data objects to three dimensional data objects and displaying the converted three dimensional data objects,

wherein a three dimensional image is generated using digital terrain elevation data from an object oriented database on a remote computer and two dimensional feature data stored on a server and retrieved by the applet.

2. A method of distributing in real-time geospatial data over a object oriented spatial database network connecting together computers, the method comprising:

receiving from a client computer in the database network an area of interest from a visual image, representing active data objects, displayed on a computer on the network;

identifying data available for the area of interest;

responsive to a request for the data, querying over the network data objects in at least one database associated with the area of interest;

receiving from at least one remote computer over the network data objects in the database associated with the area of interest and creating an object-oriented database of geospatial data using object models;

transmitting a web-based applet to the client computer for viewing the data objects overlaid on a map display; and

converting two dimensional data objects to three dimensional data objects using gridded, triangulated irregular network, and vector data and displaying the converted three dimensional data objects.

3. The method according to claim **2**, wherein the geospatial data includes temporal information.

4. The method according to claim **2**, wherein the data objects are displayed in three dimensions.

5. The method according to claim **2**, wherein the querying is performed using an interface system conforming to Common Object Request Broker Architecture.

6. The method of distributing in real-time geospatial data over a network according to claim **2**, wherein the querying includes receiving database, library, theme and features as data objects.

7. The method according to claim **2**, wherein said applet allows a user at the client computer to view the data objects overlaid on the map display without downloading the database from the remote computer.

8. The method according to claim **2**, further comprising creating an object-oriented database of geospatial data associated with the area of interest responsive to receiving the area of interest.

9. The method according to claim **8**, further comprising storing the object-oriented database on a storage unit connected to the network without downloading the database to the client computer.

10. The method according to claim **2**, further comprising an object request broker interfacing between the applet and a server, the applet executing on the client computer.

11. The method according to claim **2**, wherein at least one of the object oriented databases includes data from environmental sensors.

12. The method according to claim **2**, wherein at least one of the object oriented databases includes temporal weather information.